

Attorney Docket No.: 0140105

In the Claims:

Claim 1 (currently amended): A coarse tuning circuit coupled to a voltage controlled oscillator, ~~said voltage controlled oscillator including~~ said coarse tuning circuit further coupled to a phase locked loop coupled to a loop filter, said loop filter generating a fine tuning voltage to said voltage controlled oscillator, said coarse tuning circuit comprising:

a lock detect monitoring circuit coupled to said phase locked loop, said lock detect monitoring circuit configured to determine a state of said phase locked loop;

a VTUNE monitoring circuit configured to determine said fine tuning voltage generated by said loop filter;

an autotuner circuit connected to said lock detect monitoring circuit and said VTUNE monitoring circuit, said autotuner circuit configured to provide coarse tuning [[of]] to said voltage controlled oscillator based on said fine tuning voltage and said state of said phase locked loop.

Claim 2 (currently amended): The coarse tuning circuit of claim 1 wherein said autodetect autotuner circuit defines a capacitive value of a tank circuit of said voltage controlled oscillator.

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Claim 3 (currently amended): The coarse tuning circuit of claim 1 wherein said autodetect autotuner circuit defines a selection setting for a plurality of switched capacitors, said plurality of switched capacitors defining a capacitive value of a tank circuit of said voltage controlled oscillator.

Claim 4 (currently amended): The coarse tuning circuit of claim 1 wherein said autotuner circuit adjusts a coarse tuning value of said voltage controlled oscillator, said coarse tuning value defining a capacitive value of a tank circuit of said voltage controlled oscillator.

Claim 5 (currently amended): The coarse tuning circuit of claim 4 wherein said autotuner circuit sets said coarse tuning value of said voltage controlled oscillator when said state of said phase locked loop is locked and said fine tuning voltage is within a predetermined voltage range.

Claim 6 (currently amended): The coarse tuning circuit of claim 5 wherein said autotuner circuit increases said coarse tuning value to a higher setting if said fine tuning voltage is greater than a first voltage threshold, wherein said higher setting increases a capacitive value of a tank circuit of said voltage controlled oscillator.

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Claim 7 (currently amended): The coarse tuning circuit of claim 6 wherein said autotuner circuit decreases said coarse tuning value to a lower setting if said fine tuning voltage is less than a second voltage threshold, wherein said lower setting decreases said capacitive value of said tank circuit of said voltage controlled oscillator.

Claim 8 (currently amended): The coarse tuning circuit of claim 1 wherein said loop filter is not disconnected from said voltage controlled oscillator during said coarse tuning of said voltage controlled oscillator.

Claim 9 (currently amended): A method for coarse tuning a voltage controlled oscillator, ~~said voltage controlled oscillator including~~ wherein a phase locked loop is coupled to a loop filter, and wherein said loop filter generating generates a fine tuning voltage to said voltage controlled oscillator, said method comprising the steps of:

monitoring said phase locked loop to determine a state of said phase locked loop;
monitoring said loop filter to determine said fine tuning voltage generated by said loop filter;
coarse tuning said voltage controlled oscillator based on said fine tuning voltage and said state of said phase locked loop.

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Claim 10 (original): The method of claim 9, wherein said coarse tuning further comprises defining a capacitive value of a tank circuit of said voltage controlled oscillator based on said fine tuning voltage and said state of said phase locked loop.

Claim 11 (original): The method of claim 9, wherein said coarse tuning further comprises defining a selection setting for a plurality of switched capacitors, said plurality of switched capacitors defining a capacitive value of a tank circuit of said voltage controlled oscillator.

Claim 12 (original): The method of claim 9, wherein said loop filter is not disconnected from said voltage controlled oscillator during said tuning of said voltage controlled oscillator.

Claim 13 (original): The method of claim 9, wherein said coarse tuning further comprises setting a coarse tuning value of said voltage controlled oscillator when said state of said phase locked loop is locked and said fine tuning voltage is within a predetermined voltage range.

Claim 14 (original): The method of claim 13, wherein said coarse tuning further comprises increasing said coarse tuning value to a higher setting if said fine tuning

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voltage is greater than a first voltage threshold, said higher setting increasing a capacitive value of a tank circuit of said voltage controlled oscillator.

Claim 15 (original): The method of claim 14, wherein said coarse tuning further comprises decreasing said coarse tuning value to a lower setting if said fine tuning voltage is less than a second voltage threshold, said lower setting decreasing said capacitive value of said tank circuit of said voltage controlled oscillator.

Claim 16 (original): The method of claim 15, wherein said coarse tuning further comprises designating a selection setting for a plurality of switched capacitors, said plurality of switched capacitors defining a capacitive value of said tank circuit of said voltage controlled oscillator.

Claim 17 (currently amended): A coarse tuning circuit coupled to a voltage controlled oscillator, said voltage controlled oscillator including said coarse tuning circuit further coupled to a phase locked loop coupled to a loop filter, said loop filter generating a fine tuning voltage to said voltage controlled oscillator, said coarse tuning circuit comprising:

a lock detect monitoring circuit coupled to said phase locked loop, said lock detect monitoring circuit configured to determine a state of said phase locked loop;

a VTUNE monitoring circuit configured to determine said fine tuning voltage generated by said loop filter; an autotuner circuit connected to said lock detect monitoring circuit and said VTUNE monitoring circuit, said autotuner circuit configured to define a coarse tuning value of said voltage controlled oscillator based on said fine tuning voltage and said state of said phase locked loop, wherein said coarse tuning value designates a selection setting for a plurality of switched capacitors, said plurality of switched capacitors defining a capacitive value of a tank circuit of said voltage controlled oscillator.

Claim 18 (currently amended): The coarse tuning circuit of claim 17 wherein said autotuner circuit sets said coarse tuning value of said voltage controlled oscillator when said state of said phase locked loop is locked and said fine tuning voltage is within a predetermined voltage range.

Claim 19 (currently amended): The coarse tuning circuit of claim 18 wherein said autotuner circuit increases said coarse tuning value to a higher setting if said state of said phase locked loop is not locked and said fine tuning voltage is greater than a first voltage threshold, wherein said higher setting increases said capacitive value of said tank circuit of said voltage controlled oscillator.

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Claim 20 (currently amended): The coarse tuning circuit of claim 19 wherein said autotuner circuit decreases said coarse tuning value to a lower setting if said state of said phase locked loop is not locked and said fine tuning voltage is less than a second voltage threshold, wherein said lower setting decreases said capacitive value of said tank circuit of said voltage controlled oscillator.